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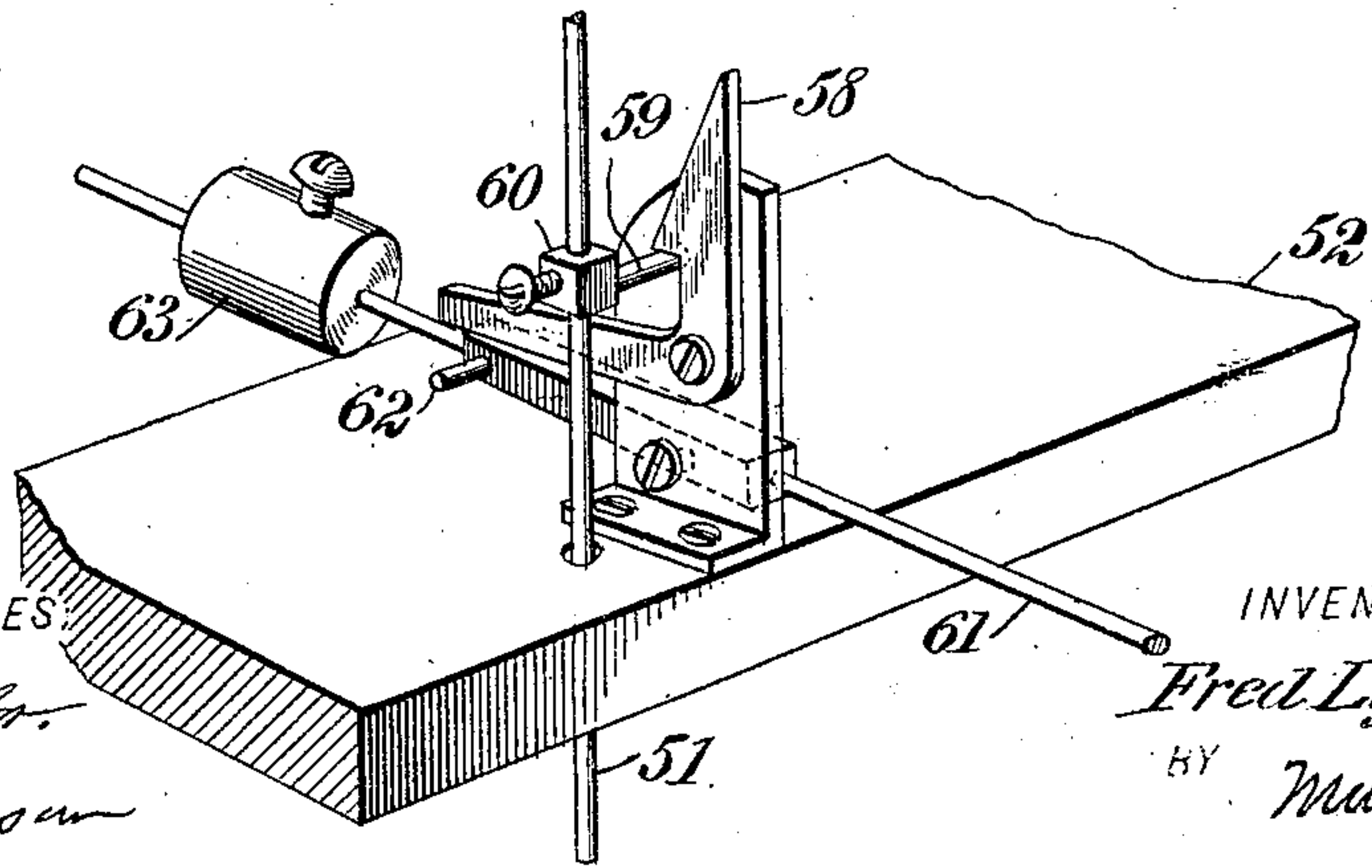
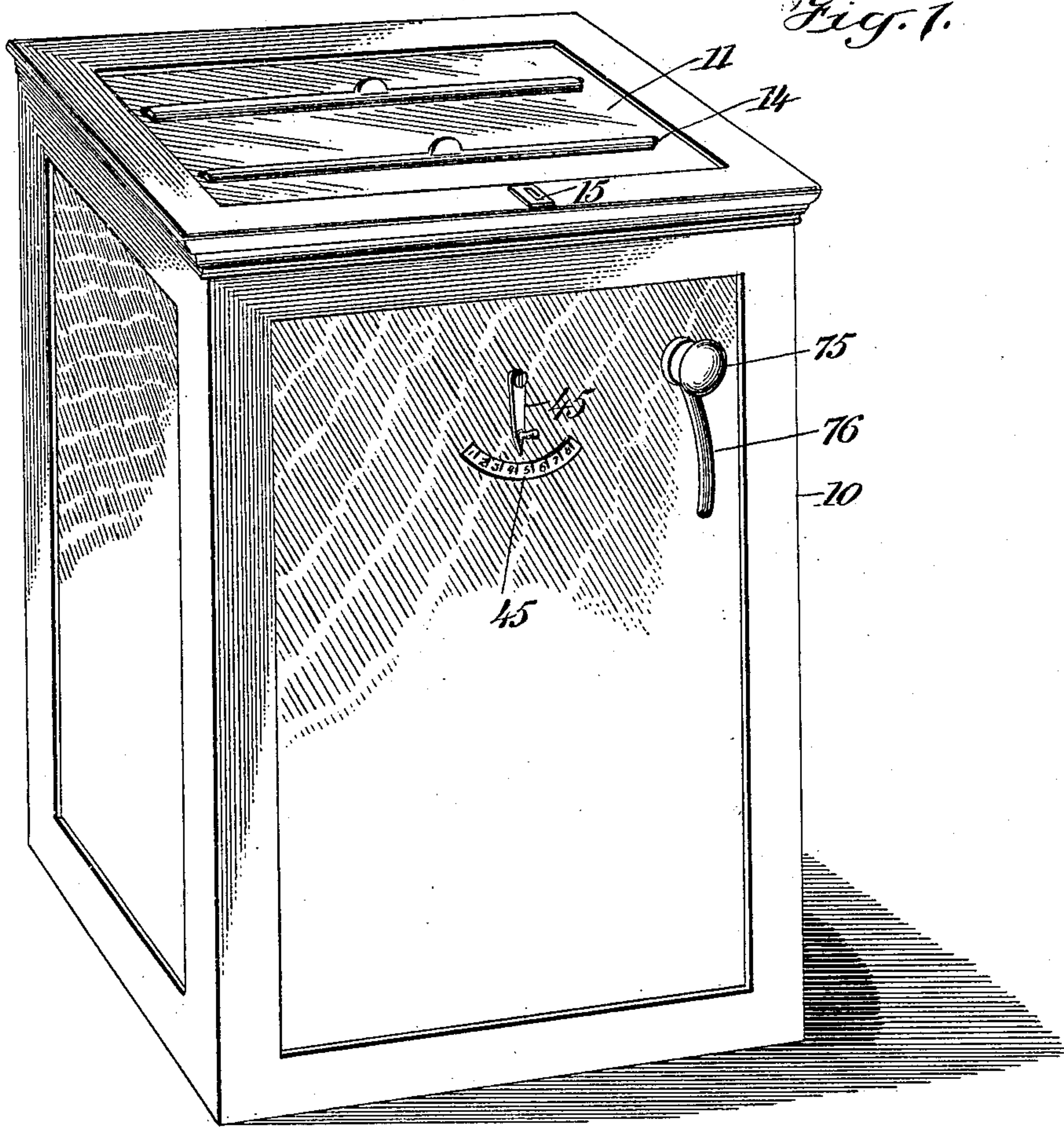
PATENTED JUNE 28, 1904.

F. LYNES.
VENDING MACHINE.

APPLICATION FILED JAN. 22, 1903.

NO MODEL.

5 SHEETS—SHEET 1..



WITNESSES

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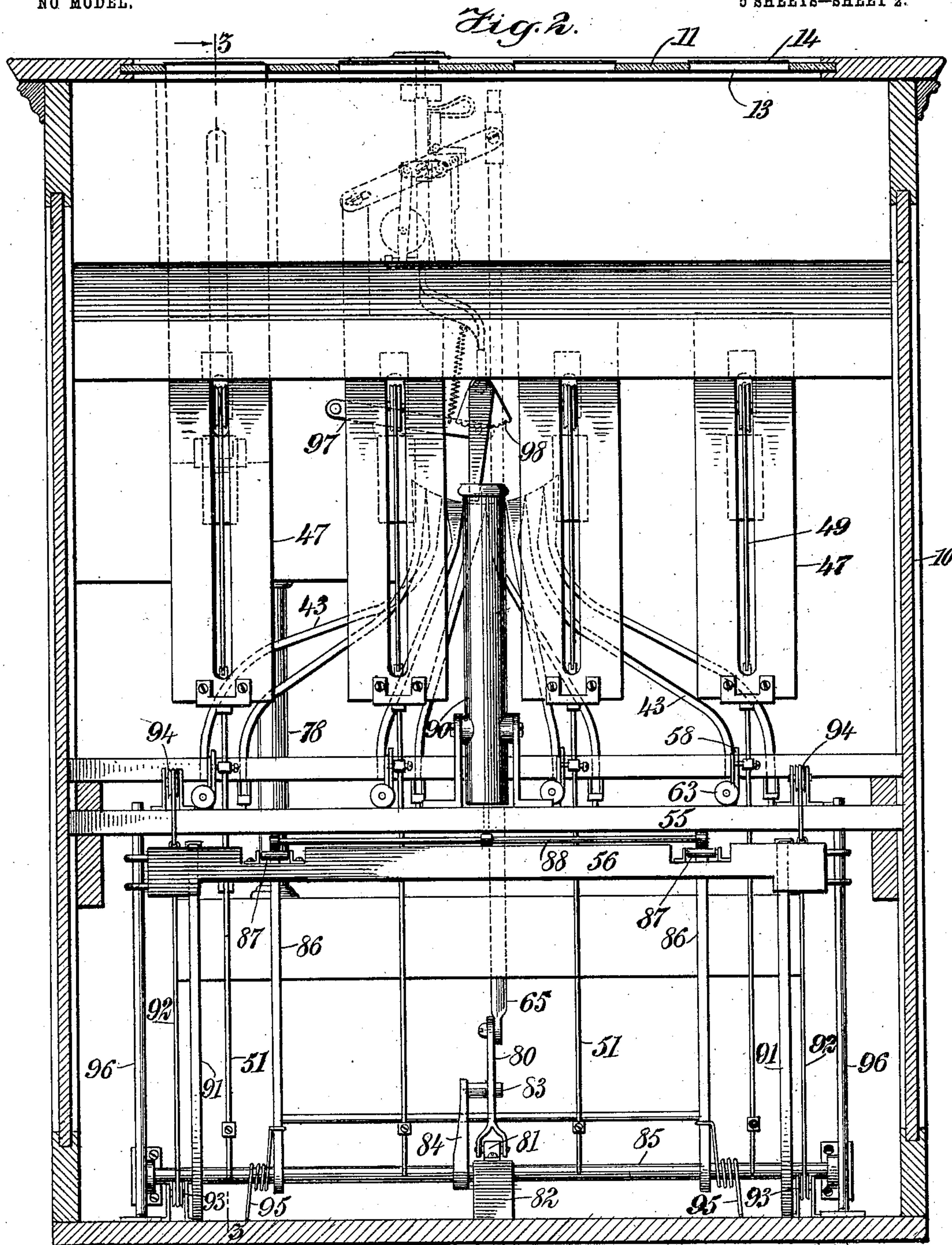
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5 SHEETS—SHEET 2.



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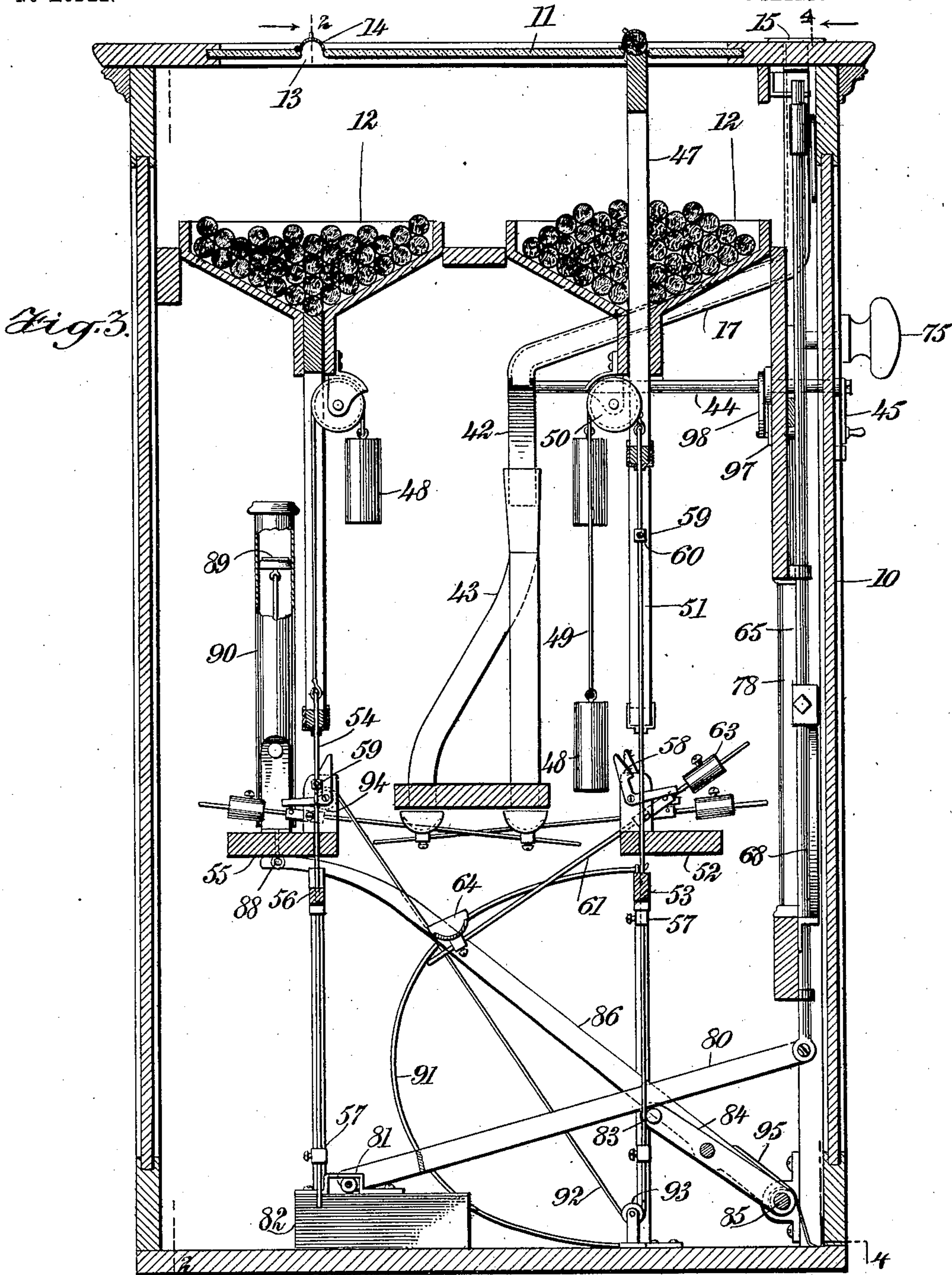
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5 SHEETS—SHEET 3.



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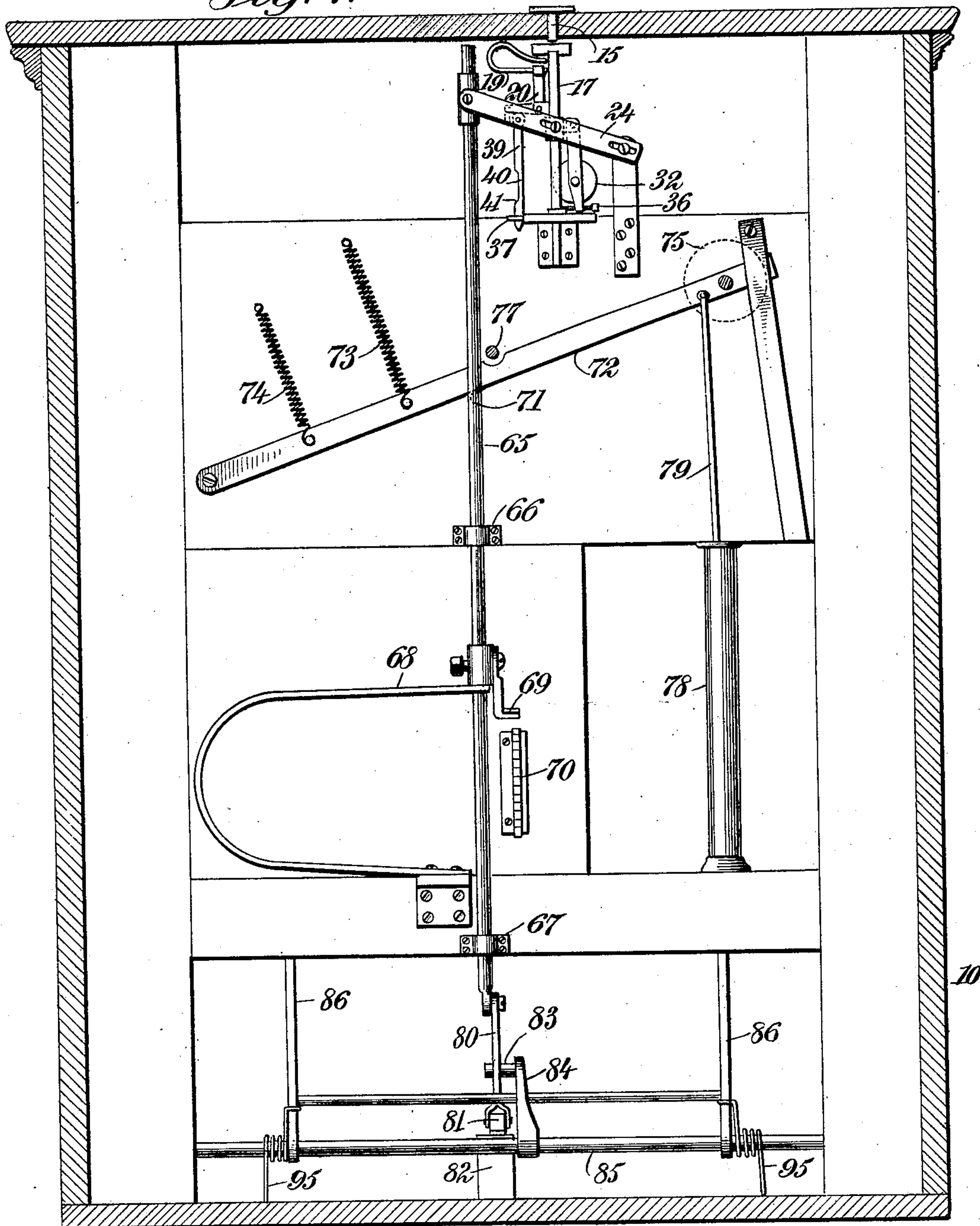
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5 SHEETS—SHEET 4.

Fig. 4.



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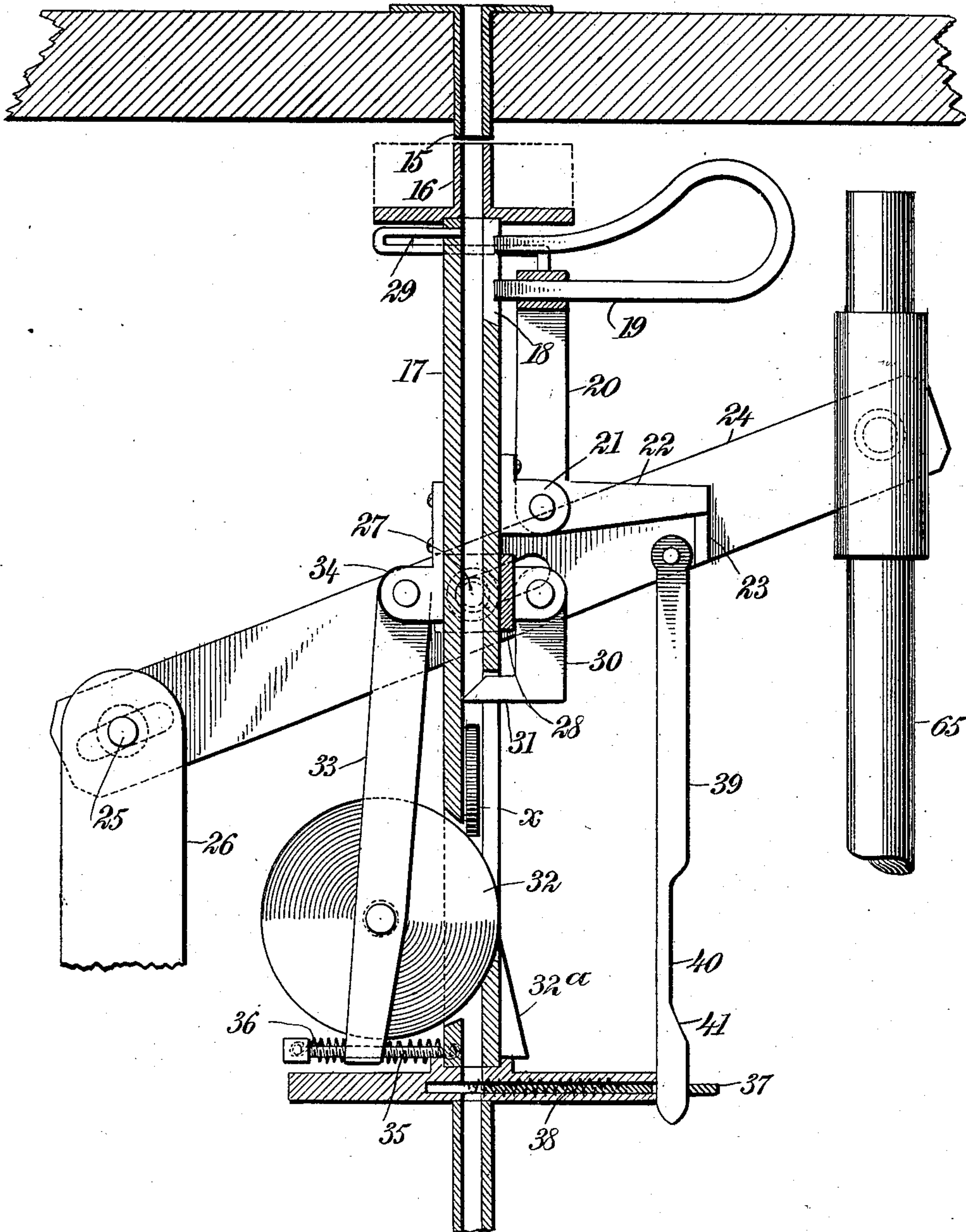
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6 SHEETS—SHEET 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

FRED LYNES, OF JOHNSTOWN, NEW YORK.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 763,413, dated June 28, 1904.

Application filed January 22, 1903. Serial No. 140,089. (No model.)

To all whom it may concern:

Be it known that I, FRED LYNES, a citizen of the United States, and a resident of Johnstown, in the county of Fulton and State of New York, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in vending-machines, an object being to provide a machine of this character adapted to contain articles of different values or grades, such as cigars, and operating to deliver an article from any desired one of the several receptacles upon the insertion of a coin, and directing the money by means of a novel mechanism and a controlling mechanism for the desired receptacle.

Other objects of the invention will appear in the general description.

I will describe a vending-machine embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a vending-machine embodying my invention. Fig. 2 is a sectional elevation on the line 2 2 of Fig. 3. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 is a section on the line 4 4 of Fig. 3. Fig. 5 is a perspective view of one of the ejector-locking devices, and Fig. 6 is a sectional detail view of the coin-chute mechanism.

Referring to the drawings, 10 designates a casing having a transparent or glass top 11, and in the upper portion of the casing is a plurality of hopper-like receptacles 12 for the goods to be vended. As here shown, there are eight of these receptacles, four at the front and four at the rear. The glass top is provided over each set or series of receptacles with an outlet-opening 13, and over each opening 13 is a curved cover 14, of metal, hinged at its ends, so that it may be turned up when a cigar raised by a plunger is to be removed.

The coin-chute consists of a section 15, leading through the top of the frame at the front,

a section 16, and a section 17. The section 17 at the top and at one side is provided with a slot 18, into which the poles of a permanent magnet 19 slightly project when in normal position. This permanent magnet 19 is mounted on a standard 20, pivoted to a lug 21, attached to the coin-chute section 17, and provided with an outwardly-extended arm 22, designed to be engaged by a lug 23 on a lever 24, which has sliding connection with a pivot 25 on a standard 26 and also has sliding connection with a pivot 27, attached to a sleeve 28, mounted to slide vertically on the coin-chute section 17. The permanent magnet is designed to catch and hold disks of metal, such as iron or other magnetic material, and when the machine is operated to discharge the same at the outer side of the chute—that is, when the lever 24 is moved downward, as will be hereinafter described, the permanent magnet will fall downward by gravity and drop the disk. Also connected to the upright 20 is a pin 29, movable through an opening in the side wall of the chute-section 17 and across the opening thereof. This is designed to prevent the entrance of a coin when the machine is open or in operation. Mounted to swing on the sleeve 28 is a push-bar 30 for forcing a coin downward. This push-bar has two fingers 31 extended through a slot in a side wall of the chute-section 17 and designed to pass on opposite sides of a wheel 32, and the ends of the fingers at the upper side are inclined, as clearly indicated in Fig. 6, so that the push-bar may be forced outward when the coin or other article strikes it. Below the push-bar is a wheel 32 for forcing out a disk of soft material—such, for instance, as lead. This wheel extends through openings in the walls of the chute-section 17 and is mounted on a hanger 33, pivoted to a stud 34, attached to the coin-chute. The lower end of this hanger is provided with an opening which receives a screw-rod 35 for the purpose of adjustment, and it is moved in one direction by means of a spring 36. Below the discharge-wheel 32 is a slide-plate 37. This is movable in guides across the coin-chute, so as to temporarily hold a coin, as will hereinafter appear. This plate 37 is moved in—

ward by means of a spring 38, and it is moved outward to open the coin-chute by means of a rod 39, pivotally connected to the lever 24 and passing through a slot in said plate 37.

5 This rod 39 has a reduced portion 40, and when this reduced portion 40 is within the slot in the plate the said plate may be moved inward to close the coin-chute; but when the lever 24 is moved upward, or partially up-

10 ward, the said plate will be moved outward, so as to permit the dropping of a coin, by means of a cam portion 41 at the lower end of the reduced portion 40. At the lower end of the coin-chute section 17 and of course com-

15 municating therewith is a swinging section 42, designed to be moved to direct a coin to any one of a series of chutes 43 leading to the different controlling devices for the various ejectors. This swinging section is operated

20 by means of a rod 44, extended outward through the front wall of the casing 10, and at its outer end it is provided with a crank-handle 45, which has a pointed end so as to indicate on a scale 46 the mechanism that is to

25 be put in operation to discharge a cigar or the like. While this coin-chute mechanism forms no part of the present invention, it may be well to describe its operation as follows: Should a disk of magnetic material be dropped

30 into the chute, it would be attracted by the magnet 19, as before described, and drawn out should an attempt be made to operate the machine. Should a disk of soft metal be inserted, it will drop upon the fingers 31 of the

35 push-bar 30, forcing said bar outward so as the disk will fall below the same to the position indicated at *x*. Now upon the downward movement of the lever 24 the said disk will be forced against the wheel 32, which will

40 bend it and force it out through the said opening of the chute over an incline 32^a. Should a proper coin be inserted, it will fall in the same manner as the soft-metal disk described; but it will be forced downward by the push-

45 bar forcing the wheel outward, and during this movement the plate 37 will be moved inward, so that the nickel or other coin will rest on said plate in the machine, from which it will fall into the swinging section 42 when

50 the operating mechanism is released and the lever 24 is moved upward.

Movable vertically through each receptacle 12 is an ejector 47. The ejectors are moved upward by means of weights 48, from which cords

55 49 extend over pulleys 50 and connect with the lower ends of the ejectors. The front ejectors have rods 51 extended downward and movable through fixed rails 52 and also movable through bars 53, which are movable with relation to the bars 52. The rods 54 of the op-

60 posite or rear ejectors move through openings in a fixed bar 55 and also through a bar 56, movable with relation to the fixed bar 55. Adjustable on each rod is a block 57, which

65 is designed to engage with the bars 53 or 56

to move the same upward, as will hereinafter appear. As a means for controlling the ejectors or holding them downward in locked position I employ hook-shaped catches 58, mounted on standards connected to the bars 70 52 and 55. The hook portions of the catches are designed to engage with pins 59, extended from blocks 60, adjustable on the rods. On the standard of each catch a releasing-rod 61 is pivoted and carries a pin 62 for engaging 75 with the horizontally-disposed member of the catch. On one end of the rod a counterbalance-weight 63 is adjustably mounted, and on the other end is a pan or receiver 64, into which a coin from the chute 43, to which said pan 80 belongs, will drop and swing the rod 61, causing the pin 62 to force the catch out of engagement with the pin 59, permitting the plunger to be moved upward under the influence of its weight, thus raising a cigar or 85 other article through the opening 13, as indicated in Fig. 3.

Movable vertically at the inner side of the front wall of the casing is an operating-rod 65. This rod is pivotally connected to the 90 lever 24 and is movable through guides 66 67, and it is moved upward by means of a spring 68. The rod is prevented from upward movement before it has completed downward movement by means of a pawl 69 engaging with a 95 rack 70, attached to the casing or a portion thereof. The operating-rod 65 is provided with a pin 71, designed to be engaged by a lever 72, which is held normally upward or moved upward after operation by means of a 100 spring or springs 73 74. To the front end of this lever 72 a knob 75 is connected, the shank portion of said knob passing through an arc slot 76 in the front wall of the casing. The lever 72 is limited in its upward movement 105 by coming to the end of the arc slot 76. To prevent jamming or racking the machine upon operating the knob 75, I provide a dash-pot 78, from the piston of which a rod 79 extends to connection with the lever 72. The lower 110 end of the rod 65 is pivotally connected to a lever 80, which has sliding movement in a yoke 81, attached to a block 82, secured to the bottom board of the casing. This lever 80 is designed to engage with a pin 83, extended 115 laterally from an arm 84, attached to a rock-shaft 85, and extended rigidly from this rock-shaft 85 are arms 86, which extend over and bear upon rollers 87, mounted on the bar 56. The upper ends of these arms 86 are connected 120 by a rod 88, and to this rod 88 is attached the stem of a piston 89, operating in a cylinder 90. This piston and cylinder are designed to govern the working of the machine—that is, to prevent its operating too rapidly. 125

C-shaped springs 91 are fast at one end to the bottom of the casing and at the upper end to the bar 53 near its ends, and from this bar 53 cords or chains 92 extend under rollers 93, thence over rollers 94, and connect with the 130

bar 56. The arms 86 are moved upward by means of springs 95, connected at one end to the casing and at the other end to said arms. The bars 53 and 56 are guided on rods, as indicated at 96. The swinging chute 42 will be held in its adjusted position by means of a pin on a spring-pressed lever 97 engaging with a notch in a segment-rack 98.

In the operation after inserting a coin the knob 75 is to be moved downward. During the initial movement the coin will be moved, if of proper weight and denomination, to the stop-plate 37, and then by a still further movement of the knob the said stop-plate will be moved outward, permitting the coin to fall into one of the pans or receivers, and by its weight the coin will operate a latch, as before mentioned, releasing a plunger, which will be forced upward and by its weight carry a cigar or other article outward. During the complete downward movement of the knob the bars 53 and 56 will be moved downward by the operating-rod 65 through the medium of the lever 80 engaging with the arm 84, and the movement of this arm 84 will cause the downward movement of the arms 86, forcing the bar 56 downward, and at the same time the bar 53 will be moved downward through the medium of the cords or chains 92, thus causing the plunger, that may be in an upward position, caused by the previous operation of the machine, to be moved downward by the bar engaging with the block 57 of said plunger. The bars will be movable upward to normal position as the operating-rod 65 moves upward, by means of the springs 91 raising the bar 53, and the cord connections 92 between the bars will cause the bar 56 to rise. Of course after the coin drops out of a pan the counterweight 63 will swing the pan back to normal position, leaving the latch free to engage the pin 59 and relock the plunger.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a vending-machine, a plurality of receptacles for goods, ejectors movable vertically through the receptacles, a coin-actuated means for releasing a plunger to move upward and at the same time moving an operated plunger downward, and means for directing a coin to any one of the releasing devices.

2. In a vending-machine, a casing, a plurality of receptacles for goods in said casing, ejectors movable vertically in the receptacles, a coin-actuated mechanism for releasing the ejectors, and means for releasing a plunger and at the same time moving an operated plunger to its lowermost and locked position.

3. In a vending-machine, a casing, a plural-

ity of receptacles for goods in said casing, ejectors movable vertically through the receptacles, a locking device for each ejector, a swinging counterbalance-rod for each locking device, a coin-receiver carried by each rod, and a swinging chute for directing a coin to each receiver.

4. In a vending-machine, a casing, a plurality of receptacles for goods in said casing, ejectors movable vertically through the receptacles, weights for causing the upward movements of said ejectors, coin-actuated controlling devices for the ejectors, and a vertically-movable rod for moving the ejectors downward, and at the same time forcing a coin downward to release an ejector.

5. In a vending-machine, a casing, a receptacle for goods in said casing, an ejector movable vertically through said receptacle, means for moving the ejector upward, a coin-controlled releasing means for the ejector, a coin-chute, a lever having sliding connection with said coin-chute, a knob or button on the outer side of the casing, and having connection with said lever, a rod pivotally connected to the lever, and means actuated by a downward movement of said rod for moving the ejectors downward.

6. In a vending-machine, a casing, a plurality of receptacles for goods in said casing, ejectors movable vertically through said receptacles, a coin-released mechanism for holding the ejectors in their lowermost position, means for moving the ejectors upward, a series of coin-chutes leading to the various releasing devices, a main coin-chute, a swinging coin-chute section, a rod extended outward through the wall of the casing for operating said swinging section, a spring-pressed lever, and a segment-rack for engaging with said lever to hold the swinging section as adjusted.

7. In a vending-machine, a casing, a plurality of receptacles for goods in said casing, ejectors movable vertically in the receptacles, coin-controlled locking devices for holding the ejectors in lowered position, a coin-chute, a vertically-movable rod operated from the outer side of the casing, means operated by said rod for moving an ejector from its upper to its lower position, and means operated during the downward movement of said rod for forcing a coin through the coin-chute.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED LYNES.

Witnesses:

WM. W. CHAMBERLAIN,
MATTHEW T. SHAFFER.